Serial No. 10/678,105 Docket No. 02-293137

YAN.038

## **AMENDMENTS TO THE CLAIMS:**

## Please amend the claims as follows:

1. (Original) A mobile communication system including a core network having a node with a packet switching function for packet data communication, a radio network controller, and a mobile terminal, wherein a connection is set on an interface between the radio network controller and the node, the mobile communication system comprising:

connection setting means for setting the connection for multicast data communication faster than the packet data communication, separately from the connection for the packet data communication.

- 2. (Original) The mobile communication system according to claim 1, wherein the connection setting means sets the connection for the multicast data communication in common to a plurality of mobile terminals that attempt to receive a service of the multicast data communication.
- 3. (Original) The mobile communication system according to claim 2, wherein the connection setting means sets the connection for the multicast data communication in response to a service receiving request from a first mobile terminal attempting to receive the multicast data communication service.
- 4. (Original) The mobile communication system according to claim 2, further comprising:
- a first connection releasing means for releasing the connection for the multicast data communication in response to a service leaving request from a last mobile terminal

Docket No. 02-293137

YAN.038

receiving the multicast data communication service.

5. (Original) The mobile communication system according to claim 1, wherein the

3

connection setting means sets the connection for the multicast data communication

individually to each of the plurality of the mobile terminals that attempt to receive the

multicast data communication service.

6. (Original) The mobile communication system according to claim 5, further

comprising:

a second connection releasing means for, in response to the multicast data

communication service leaving request from each of the plurality of mobile terminals,

releasing the connection for the multicast data communication corresponding to the

mobile terminal.

7. (Original) The mobile communication system according to claim 1, wherein the

connection for the multicast data communication in the mobile terminal is managed in a

PS domain including an area for the packet switching function in the core network.

8. (Original) The mobile communication system according to claim 1, wherein the

connection for the multicast data communication in the mobile terminal is managed in a

domain dedicated to the multicast data communication which is different from the PS

domain including the area for the packet switching function in the core network.

9. (Original) A method of controlling operations in a mobile communication system

including a core network having a node with a packet switching function for packet data

communication, a radio network controller, and a mobile terminal, wherein a connection is set on an interface between the radio network controller and the node, the method comprising:

a connection setting step of setting the connection for multicast data communication faster than the packet data communication, separately from the connection for the packet data communication.

- 10. (Original) The method according to claim 9, wherein the connection setting step includes setting the connection for the multicast data communication in common to a plurality of mobile terminals that attempt to receive a service of the multicast data communication.
- 11. (Original) The method according to claim 10, wherein the connection setting step includes setting the connection for the multicast data communication in response to a service receiving request from a first mobile terminal attempting to receive the multicast data communication service.
- 12. (Original) The method according to claim 10, further comprising:
- a first connection releasing step of releasing the connection for the multicast data communication in response to a service leaving request from a last mobile terminal receiving the multicast data communication service.
- 13. (Original) The method according to claim 9, wherein the connection setting step includes setting the connection for the multicast data communication individually to each of the plurality of the mobile terminals that attempt to receive the multicast data

Serial No. 10/678,105 Docket No. 02-293137

**YAN.038** 

communication service.

14. (Original) The method according to claim 13, further comprising:

a second connection releasing step of, in response to the multicast data communication service leaving request from each of the plurality of mobile terminals, releasing the connection for the multicast data communication corresponding to the mobile terminal.

5

15. (Original) A node in a mobile communication system including a core network having a node with a packet switching function for packet data communication, a radio network controller, and a mobile terminal, wherein a connection is set on an interface between the node and the radio network controller, the node in the mobile communication system comprising:

connection setting means for setting the connection for multicast data communication faster than the packet data communication, separately from the connection for the packet data communication.

16. (Original) The node according to claim 15, wherein the connection setting means sets the connection for the multicast data communication in common to a plurality of mobile terminals that attempt to receive a service of the multicast data communication.

17. (Original) The node according to claim 16, wherein the connection setting means sets the connection for the multicast data communication in response to a service receiving request from a first mobile terminal attempting to receive the multicast data communication service.

Docket No. 02-293137

YAN.038

18. (Original) The node according to claim 16, further comprising:

a first connection releasing means for releasing the connection for the multicast

6

data communication in response to a service leaving request from a last mobile terminal

receiving the multicast data communication service.

19. (Original) The node according to claim 15, wherein the connection setting means

sets the connection for the multicast data communication individually to each of the

plurality of the mobile terminals that attempt to receive the multicast data communication

service.

20. (Original) The node according to claim 19, further comprising:

a second connection releasing means for, in response to the multicast data

communication service leaving request from each of the plurality of mobile terminals,

releasing the connection for the multicast data communication corresponding to the

mobile terminal.

21. (Original) A computer readable program for making a computer execute operation

controlling of a node in a mobile communication system including a core network having

a node with a packet switching function for packet data communication, a radio network

controller, and a mobile terminal, wherein a connection is set on an interface between the

radio network controller and the node, the program comprising:

a connection setting step of setting the connection for multicast data

communication faster than the packet data communication, separately from the

connection for the packet data communication.

Docket No. 02-293137

YAN.038

22. (Original) The program according to claim 21, wherein the connection setting step

7

includes setting the connection for the multicast data communication in common to a

plurality of mobile terminals that attempt to receive a service of the multicast data

communication.

23. (Original) The program according to claim 22, wherein the connection setting step

includes setting the connection for the multicast data communication in response to a

service receiving request from a first mobile terminal attempting to receive the multicast

data communication service.

24. (Original) The program according to claim 22, further comprising:

a first connection releasing step of releasing the connection for the multicast data

communication in response to a service leaving request from a last mobile terminal

receiving the multicast data communication service.

25. (Original) The program according to claim 21, wherein the connection setting step

includes setting the connection for the multicast data communication individually to each

of the plurality of the mobile terminals that attempt to receive the multicast data

communication service.

26. (Original) The program according to claim 25, further comprising:

a second connection releasing step of, in response to the multicast data

communication service leaving request from each of the plurality of mobile terminals.

releasing the connection for the multicast data communication corresponding to the

mobile terminal.

Docket No. 02-293137

**YAN.038** 

27. (New) A mobile communication system, comprising:

a core network for packet switching; and

a radio network controller which initiates a request for signaling connection to

8

said core network to set on an interface with said core network,

wherein, if a request is related to multimedia broadcast multicast service, said core

network initiates a request for signaling connection to said radio network controller,

instead of the request being initiated from said radio network controller.

28. (New) The mobile communication system claimed in claim 27, wherein a single

signaling connection initiated for said multimedia broadcast multicast service is shared

among a plurality of mobile terminals which receive common multimedia broadcast

multicast service.

29. (New) The mobile communication system claimed in claim 28, wherein said single

signaling connection for said multimedia broadcast multicast service is separately

initiated from a signaling connection for packet service which is not said multimedia

broadcast multicast service.

30. (New) The mobile communication system claimed in claim 28, wherein, when said

single signaling connection for said multimedia broadcast multicast service is set and

another mobile terminal requests for receiving said multimedia broadcast multicast

service, the other mobile terminal receives said multimedia broadcast multicast service by

using said single signaling connection.

9

Serial No. 10/678,105 Docket No. 02-293137

YAN.038

31. (New) The mobile communication system claimed in claim 30, wherein said core network releases said single signaling connection for said multimedia broadcast multicast service in response to a multimedia broadcast multicast service leaving request from a last mobile terminal receiving said multimedia broadcast multicast service.

- 32. (New) The mobile communication system claimed in claim 30, wherein, in response to a multimedia broadcast multicast service leaving request from each of said plurality of mobile terminals, said core network releases the signaling connection for said multimedia broadcast multicast service corresponding to the mobile terminal.
- 33. (New) A method of controlling operation in a mobile communication system including a core network for packet switching, and a radio network controller which initiates a request for signaling connection to said core network to set on an interface with said core network, the method comprising:

if a request is related to multimedia broadcast multicast service, initiating a request for signaling connection to said radio network controller, instead of initiating the request from said radio network controller,.

- 34. (New) The method claimed in claim 33, wherein said initiating a request includes setting single signaling connection initiated for said multimedia broadcast multicast service to be shared among a plurality of mobile terminals those of which receive common multimedia broadcast multicast service.
- 35. (New) The method claimed in claim 34, wherein said initiating includes setting said single signaling connection for said multimedia broadcast multicast service to be

Serial No. 10/678,105 Docket No. 02-293137 YAN 038

separately initiated from signaling connection for packet service which is not said multimedia broadcast multicast service.

36. (New) The method claimed in claim 34, wherein, when said single signaling connection for said multimedia broadcast multicast service is set and the other mobile terminal requests for receiving said multimedia broadcast multicast service, the other mobile terminal receives said multimedia broadcast multicast service by using said single signaling connection.

37. (New) The method claimed in claim 36, further comprising:

releasing said single signaling connection for said multimedia broadcast multicast service in response to a multimedia broadcast multicast service leaving request from a last mobile terminal receiving said multimedia broadcast multicast service.

38. (New) The method claimed in claim 36, further comprising:

in response to a multimedia broadcast multicast service leaving request from each of said plurality of mobile terminals, releasing the signaling connection for said multimedia broadcast multicast service corresponding to the mobile terminal.

39. (New) A core network for a mobile communication system, comprising:

an SGSN (Serving GPRS (Global Packet Radio Service) Support Node to configure the core network and a radio network controller that is interconnected to said core network in said mobile communication system for a packet switching, said radio network controller initiating a request for signaling connection to said core network to set on an interface with said core network,

11

Serial No. 10/678,105 Docket No. 02-293137

YAN.038

wherein, if a request is related to multimedia broadcast multicast service, said core network initiates a request for signaling connection to said radio network controller, instead of the request from said radio network controller.

- 40. (New) The core network claimed in claim 39, wherein single signaling connection initiated for said multimedia broadcast multicast service is shared among a plurality of mobile terminals those of which receive common multimedia broadcast multicast service.
- 41. (New) The core network claimed in claim 40, wherein said single signaling connection for said multimedia broadcast multicast service is separately initiated from signaling connection for packet service which is not said multimedia broadcast multicast service.
- 42. (New) The core network claimed in claim 40, wherein, when said single signaling connection for said multimedia broadcast multicast service is set and the other mobile terminal requests for receiving said multimedia broadcast multicast service, the other mobile terminal receives said multimedia broadcast multicast service by using said single signaling connection.
- 43. (New) The core network claimed in claim 42, wherein said core network releases said single signaling connection for said multimedia broadcast multicast service in response to a multimedia broadcast multicast service leaving request from a last mobile terminal receiving said multimedia broadcast multicast service.

Serial No. 10/678,105 Docket No. 02-293137 YAN.038

44. (New) The core network claimed in claim 42, wherein, in response to a multimedia broadcast multicast service leaving request from each of said plurality of mobile terminals, said core network releases the signaling connection for said multimedia broadcast multicast service corresponding to the mobile terminal.